



Sammamish- Juanita 115 kV project

frequently asked questions

About the Project

What is the Sammamish-Juanita 115 kV project?

Puget Sound Energy (PSE) is working to improve electric service reliability for more than 55,000 residential and commercial customers in northern Kirkland and Redmond.

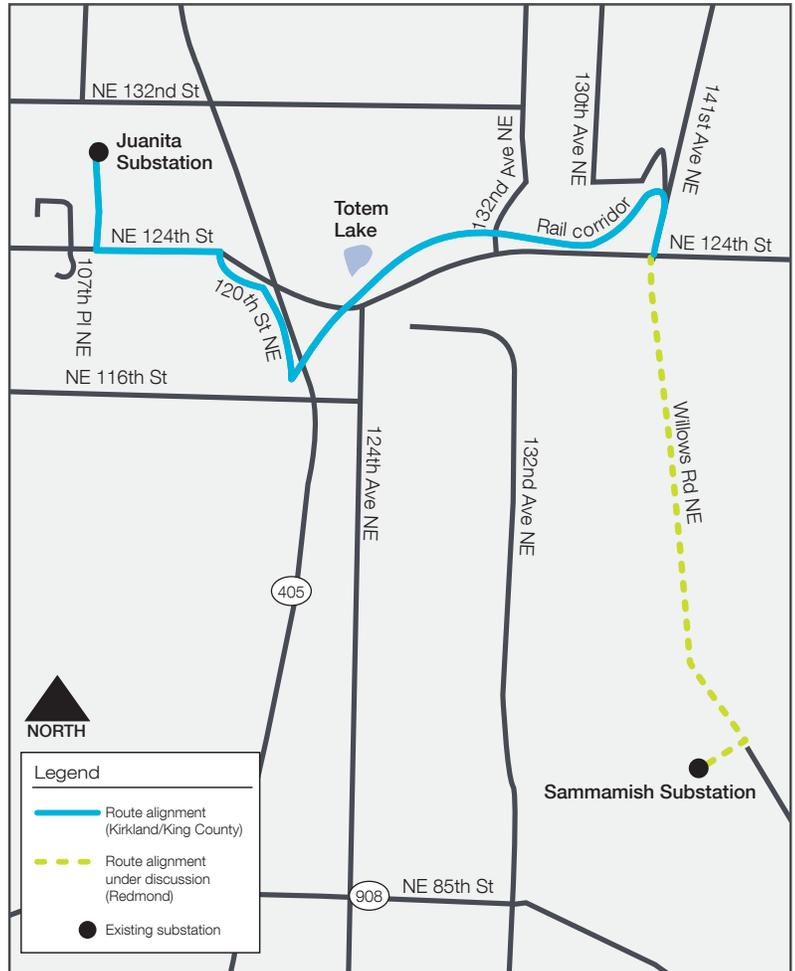
Customer power usage is straining the electric system serving the area, which reduces PSE's ability to reliably serve power and increases the possibility of outages. To increase system capacity and improve reliability for customers, PSE plans to build a new 115 kilovolt (kV) transmission line from the Sammamish substation in Redmond to the Juanita substation in Kirkland.

Why is this project needed?

Demand for power is growing. The electric system serving northern Kirkland and Redmond area – referred to as the Moorlands electric system – provides power for more than 55,000 customers.

The Moorlands system faces two problems – capacity (being able to deliver enough power) and reliability (ensuring we can provide power during times of peak usage or when parts of the system are out of service). As demand grows, portions of the Moorlands electric system are reaching capacity limits. This means under certain conditions transmission lines in the area can overload. If the lines overload, residents and businesses this area are at risk of a power outage.

By building the new Sammamish-Juanita transmission line we can reconfigure the Moorlands electric system to transfer two substations to another transmission system, thereby freeing up capacity on the Moorlands system. The new Sammamish-Juanita line will improve system reliability by adding an additional transmission pathway to the Moorlands system.



Public involvement

How did PSE involve the community in the project?

In 2011, PSE convened a stakeholder advisory group and consulted with the broader community to explore possible routes for the new Sammamish-Juanita transmission line.

The advisory group used a computer modeling tool that incorporated built and natural environment features to develop potential routes for discussion, and took into account community values and concerns to develop over 30 route alternatives. The

group narrowed the field to three route alternatives, which we reviewed and modified to ensure they were feasible and constructible.

We shared the three route alternatives with the community and hosted two community meetings. We discussed the project and route alternatives with more than 100 meeting attendees, and we received more than 400 comments.

Following the community meetings, the advisory group met to develop its preferred route recommendation for PSE. Advisory group members evaluated the three final route alternatives using six specific decision criteria, which included proximity to community land use areas and public support. The resulting preferred route was agreed upon by consensus.

We shared the advisory group's recommended preferred route with the community. After taking into consideration the advisory group's recommended preferred route and the community's response, we adopted the advisory group's recommendation as the preferred final route to further explore and design.

Why did PSE convene an advisory group to help site the transmission line? Who were the members?

We are committed to working with the community to better understand local issues to consider in determining a route alignment that would meet the needs of PSE's customers, the local community and PSE. In an urban area with multiple jurisdictions, there's no easy answer to siting a transmission line. It was important that community and business leaders were involved in the process and an advisory group was one way to do so.

We collaborated with a diverse advisory group to develop route alternatives, select a preferred final route, and help us better understand community concerns.

What are the project next steps, and how can I get involved in the project?

There will be future opportunities for public input during the permitting phase of the project, as we apply for needed permits. We anticipate submitting permit applications this year and beginning construction as early as 2017, depending on design and permitting schedules.

We encourage you to visit pse.com/sammjuan115 to learn more about the project and welcome your comments and questions at majorprojects@pse.com.

PSE thanks all of the advisory group members and their respective organizations for participating:

- **Dirk Lakin**, Aerojet (Redmond)
- **Rob Jammerman**, City of Kirkland, Public Works
- **Linda Murphy**, City of Kirkland, Parks and Community Services
- **Jean Rice**, City of Redmond, Parks
- **Eric McConaghy**, City of Redmond, Planning
- **Lynda Haneman**, Evergreen Hill Neighborhood (Kirkland)
- **Lavon Weighall**, Evergreen Hospital (Kirkland)
- **Danielle Lynch**, Greater Redmond Chamber of Commerce
- **Ken Albinger**, Juanita Neighborhood (Kirkland)
 - **Mary Dunphy**, Alternate
 - **Richard Aijala**, Alternate
- **Forrest Miller**, Lake Washington School District
- **Don Schmitz**, North Rose Hill Neighborhood (Kirkland)
- **Fred Proctor**, Proctor International, Inc (Redmond)
- **Andy Swayne**, Puget Sound Energy
- **Kathe Low**, Sustainable Redmond
- **Tom Matthews**, Willows Rose Hill Neighborhood (Redmond)
 - **Gary Wightman**, Alternate
 - **Tim McGruder**, Alternate

Past members

- **Wilson Anhar**, Aegis Living (Kirkland)
- **Cindy Jayne**, Sustainable Redmond
- **Jill Krusinski**, Grass Lawn Neighborhood/ Willows Rose Hill Neighborhood (Redmond)
- **Ron Parker**, Greater Kirkland Chamber of Commerce

Route alignment

What has PSE been doing since the advisory group recommended a route?

Using the advisory group's recommended route, we've been studying and refining the route alignments in Kirkland and Redmond. We've been learning about on-the-ground conditions to identify environmental effects and potential mitigation for environmentally-sensitive areas, such as wetlands and streams.

We've also been coordinating with property owners and agencies, like the Washington Department of Transportation, King County, Eastside Rail Corridor Regional Advisory Council, and the cities of Kirkland and Redmond, to inform our work.

Our work on the different portions of the project varies, specifically:

- In Kirkland, we have a route alignment along the rail corridor, 120th Avenue NE and NE 124th Street. We plan to submit permit applications for this portion of the project by summer 2016.
- In Redmond, we are working with the City to finalize the route alignment.

Will PSE build new wires and poles between NE 124th Street and the Juanita Substation?

The new transmission line will interconnect with an existing transmission line south of the Juanita substation in Kirkland. The existing line between the interconnection point and Juanita substation will be re-conducted or rebuilt to the substation to match the capacity of the new transmission line.

Design

How much will the project cost?

We now estimate the total costs will range from \$18 million to \$22 million. The overall project costs are dependent on many factors including micro-siting, site specific design conditions, permitting, restoration needs and easement costs.

What will the poles look like?

PSE anticipates using some combination of wood or steel poles. Steel lattice towers will not be used for this project. The photo to the right shows an example 115 kV pole design. To view other examples poles, visit pse.com/sammjuan115.



Example 115 kV pole design

How will PSE acquire right of way easements?

PSE prefers to site projects along public rights of way or existing utility corridors wherever possible. We may need to acquire property or access to and use of private property via easements. When use of private property is required, we negotiate the purchase of easements with each property owner based on an appraisal of the fair market value of their property and any impacts the easement and facilities will have on the property.

If an easement is needed on your property, a PSE real estate representative will reach out to you soon.

How tall can trees grow under 115 kV transmission lines?

Mature tree and vegetation height limits under 115 kV transmission lines generally range from 15 feet to 25 feet depending on the types of poles used. PSE is committed to working with landowners to provide assistance with long-term vegetation management.

Construction

When will construction begin and what are the anticipated impacts?

We anticipate beginning construction in 2017. As we get closer to that point we will notify and keep impacted businesses and property owners informed of specific construction activities and the schedule of the work.

In general, construction will be confined to normal daytime working hours during the week, with the possibility of some work on Saturdays. When working in or along roads, we will have signs and flaggers helping direct traffic. In some cases, we may need lane closures during construction, so we would operate under an approved traffic control plan and use flaggers to minimize traffic impacts. We do not anticipate any scheduled power outages during construction; however, if an outage is needed customers will be notified in advance of the outage occurring.

Other

What about electric and magnetic fields?

Electric and magnetic fields, or EMF, are found wherever there is electricity – in household wiring, electrical appliances, computers or power lines. Over the past 45 years, there have been many scientific studies conducted to determine if EMF has any effect on human health. To date, the scientific community has concluded that current evidence does not support the existence of any health consequences from exposure to EMF.

At PSE, safety is always our top priority and we are committed to keeping our customers informed. We understand that local residents may still wish to learn more. We've hired Drew Thatcher – an independent, board-certified health physicist – to address more specific EMF questions. If you or your neighbors would like to ask questions of Drew, our team would be happy to connect you with him for more information.

For more details about EMF studies, exposure limits and PSE's approach to EMF, visit pse.com/safety/ElectricSafety/Pages/Electromagnetic-Fields.aspx.

Will the new transmission line make a lot of noise?

In general, 115 kV transmission lines do not produce noise like some higher voltage lines may. Over the years, transmission line construction improvements have helped minimize the likelihood of audible noises.

Can PSE put the lines underground?

PSE can build underground transmission lines; however, overhead transmission lines are PSE's first option for their combination of reliability and affordability – both of which are important to our customers. While undergrounding is an available option, the biggest challenge to underground transmission lines is cost.

For a 115 kV line, it could cost \$4 million to \$10 million per mile to bury the line versus \$500,000 to \$1 million to construct an aboveground line. When a new line is constructed overhead, project costs are distributed evenly between PSE's 1.1 million customers and paid for over time. If a transmission line were to be constructed underground, we can't justify asking customers across its entire service territory to pay the significant cost increases.

That's why, per state-approved tariff rules, the requesting party, often the local jurisdiction, must ultimately decide whether to make this investment. The requesting party would then be responsible for paying the difference between overhead and underground costs.

Underground transmission lines present several hurdles, including enough space in the public right of way for the trench and vaults needed to place the line underground, ability to address the increased environmental impacts, and substantial cost sharing from the local jurisdiction/ customers to pay for the increased cost of putting the line underground.

For more information, review our underground transmission line fact sheet at pse.com/inyourcommunity/PSEConstructionProjects/Documents/UndergroundingFactSheet.pdf.

Thank you for your interest in Sammamish-Juanita 115 kV Project.

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